

- XVII. *Descriptions of new Species of the Genus Pison; and a Synonymic List of those previously described.*
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[Read 7th June, 1869.]

IN the year 1837, Shuckard published an excellent paper in the second volume of the Transactions of the Society (p. 73) on this genus of fossorial insects; at that time he could only refer to two species that had been previously described; to these he added seven, and as three of these were not in his own collection, we may conclude that thirty-two years ago, nine species only were to be found in the Collections of British Entomologists. These species were placed in two divisions, in consequence of some difference observable in the neuration of the wings; for the second division he proposed the name of *Pisonitus*, and this name I have used generically, and have added two species to those placed in that division by Shuckard. To the genus *Pison* I have added twenty-five species, thirteen of which are described in the present paper. A third division of these insects I have included in a new genus, *Parapison*, and have described three species. Thus, the nine species included in Shuckard's monograph, and forming his genus *Pison*, will now be increased to forty-three.

Nothing has been published on the habits of these insects that I am aware of, but a paper by Mr. Horne will shortly be read at the Zoological Society in which an ample history of them will appear; I can only here state that these insects are nest-builders, and that they construct cells similar to those of *Pemphredon*, and store them with spiders for their young.

Fam. NYSSONIDÆ, Leach.

Genus PISON, Jurine.

1. *Pison ater*, Spinola.
Alyson ater, Spin. Ins. Ligur. ii. 253; *Pison ater*,
Shuck. Trans. Ent. Soc. ii. 75. ♀.
 - Pison Jurinii*, Spin. Ins. Ligur. ii. 256.
 - Tachybulus niger*, Latr. Gen. Crust. et Ins. iv. 75.
- Hab.*—Europe. In F. Smith's collection.

2. *Pison punctifrons*, Shuck. Trans. Ent. Soc. ii. 77. ♀.
Hab.—India, or St. Helena. In the British Museum.
3. *Pison regalis*, Smith, Trans. Ent. Soc. New Series, ii. 34, pl. viii. fig. 9. ♀.
Hab.—China. In the British Museum.
4. *Pison xanthopus*, Brullé.
Nephridia xanthopus, Brullé, Ann. Soc. Ent. Fr. ii. 403; *Pison xanthopus*, Shuck. Tr. Ent. Soc. ii. 75.
Pison obscurus, Shuck. l. c.
Hab.—Cape of Good Hope. In F. Smith's collection.
5. *Pison Spinolæ*, Shuck. Trans. Ent. Soc. ii. 76, ♀; Sauss. Reise der Novara, Zool. Hym. 66.
P. australis, Sauss. Mém. Soc. Phys. Genève, xiv. 11.
Pison tasmanicus, Smith, Cat. Hym. Ins. pt. iv. p. 316, ♂.
Hab.—Sydney and Tasmania. In the British Museum.
6. *Pison auratus*, Shuck. Trans. Ent. Soc. ii. 78. ♀.
Hab.—Australia. (Not C. G. Hope, *vide* Shuckard's Monograph.) In the British Museum.
7. *Pison marginatus*, Smith, Cat. Hym. Ins. pt. iv. p. 314. ♀.
Hab.—Australia (Hunter River). In the British Museum.
8. *Pison perplexus*, Smith, Cat. Hym. Ins. pt. iv. p. 314. ♂.
Hab.—Australia. In the British Museum.
9. *Pison vestitus*, Smith, Cat. Hym. Ins. pt. iv. p. 315. ♀.
Hab.—Australia. In the British Museum.
10. *Pison Westwoodii*, Shuck. Trans. Ent. Soc. ii. 77. ♀.
Hab.—Tasmania. In F. Smith's collection.

11. *Pison obliquus*, Smith, Cat. Hym. Ins. pt. iv. p. 316. ♀.

Hab.—Tasmania. In F. Smith's collection.

12. *Pison morosus*, (White, Voy. Erebus and Terror, not published), Smith, Cat. Hym. Ins. pt. iv. p. 317.

Hab.—New Zealand. In the British Museum.

13. *Pison suspiciosus*, Smith, Journ. Proc. Linn. Soc. Zool. ii. 104. ♀.

Hab.—Singapore. In W. W. Saunders' collection.

14. *Pison nitidus*, Smith, Journ. Proc. Linn. Soc. Zool. iii. 160. ♀.

Hab.—Aru and Ké Islands, Mysol. In W. W. Saunders' collection.

15. *Pison pallidipalpis*, Smith, Journ. Proc. Linn. Soc. Zool. vii. 35. ♀.

Hab.—Ceram. In W. W. Saunders' collection.

16. *Pison fenestratus*, Smith.

P. nitidus, Smith, Trans. Ent. Soc. 1868, p. 248. ♀.

Hab.—Champion Bay. In F. Smith's collection.

17. *Pison paraensis*, Spin. Mem. Accad. Torino, xiii. 58.

Hab.—Para.

18. *Pison chiliensis*, Spin. Gay's Chili, vi. 326.

Hab.—Chili.

19. *Pison areolatus*, Spin. Gay's Chili, vi. 327.

Hab.—Chili.

20. *Pison lævis*, Smith, Cat. Hym. Ins. pt. iv. p. 317. ♀.

Hab.—Georgia. In the British Museum.

21. *Pison maculipennis*, Smith, Journ. of Ent. i. 80. ♀.

Hab.—Brazil. In F. Smith's collection.

22. *Pison tahitensis*, (*P. tahitense*), Saussure, Reise der Novara, Zool. Hym. 65. ♀.

Hab.—Tahiti.

23. *Pison tibialis*, n. sp.

Male. Length 4 lines. Black, punctured, abdomen with golden fasciæ, the tibiæ ferruginous.

Head and thorax very closely and strongly punctured, semi-opaque; the face covered with griseous pubescence; the anterior margin of the clypeus produced into a central acute tooth. The metathorax truncate, short and punctate, with a slight channel above, which has a longitudinal carina; the wings subhyaline, the tegulæ piceous; the tarsi, tibiæ, and apex of the posterior femora ferruginous. Abdomen closely and finely punctured, the apical margins of the segments of a testaceous yellow, and covered with a pale golden pubescence.

Hab.—West Australia.

In the British Museum.

24. *Pison basalis*, n. sp.

Female. Length 5 lines. Black; the face with golden pubescence, the tibiæ, tarsi, and two basal segments of the abdomen ferruginous.

Head opaque; the clypeus and sides of the face as high as the sinus of the eyes, with pale golden pubescence, that on the cheeks silvery; the tips of the mandibles and the four basal joints of the antennæ ferruginous. Thorax: the collar with golden pubescence, that on the sides of the thorax silvery, but only perceptible in certain lights, except at the sides of the metathorax, where it is dense; the metathorax channelled, obliquely striate above, and coarsely transversely so behind; the tegulæ and legs ferruginous, the intermediate and the posterior coxæ and trochanters, the intermediate femora above, and the posterior pair, excepting at their apex, black; the wings subhyaline, with their apical margins clouded. Abdomen: the two basal segments ferruginous, with the basal half of the first black; the margins of the segments rufotestaceous, and covered with bright silvery pile.

Hab.—Australia.

In F. Smith's collection.

This species is most closely allied to *Pison auratus*.

25. *Pison simillimus*, n. sp.

Male. Length $4\frac{3}{4}$ lines. Black, very finely and closely

punctured, the face with golden pubescence, and the abdomen with golden fasciæ.

Head: the face, as high as the emargination of the eyes, covered with golden pubescence; the clypeus with an acute tooth in the centre of its anterior margin. Thorax: the collar and mesothorax posteriorly with golden pubescence; the metathorax with a central longitudinal channel, which widens into a deep elongate fossulet down the truncate portion, which is transversely rugose-striate; the upper portion of the metathorax is obliquely rugose-striate, much more finely so than the truncation; the tegulæ rufo-testaceous; the wings hyaline, with their apical margins clouded, the nervures black; the posterior tibiæ, the apex of the anterior and posterior pair, and the tarsi, ferruginous. The apical margins of the segments of the abdomen rufo-testaceous, and covered with golden pubescence; the four apical segments have a changeable thin golden pile.

Hab.—Australia.

In F. Smith's collection.

This species is very like *P. tibialis*, but it is distinct; the mesothorax is much more finely punctured; the metathorax is longer, and so is also the basal segment of the abdomen.

26. *Pison aurifex*, n. sp.

Female. Length 6 lines. Black, opaque, splendidly ornamented with golden pubescence.

Head: the mandibles and four or five of the basal joints of the antennæ ferruginous, the latter more or less dusky above, and the extreme base and apex of the former black; the clypeus and sides of the face as high as the sinus of the eyes clothed with golden pubescence, the cheeks are similarly adorned. Thorax: the collar, the central portion of the posterior margin of the mesothorax, and the metathorax above, covered with a brilliant changeable golden pubescence; the pectus and femora also, in certain lights, have a golden effulgence; the tips of the femora, the tibiæ and tarsi, ferruginous; the wings subhyaline and iridescent, their apical margins clouded, the nervures testaceous. Abdomen: the apical margins of the segments rufo-testaceous, and covered

with a brilliant golden pile, the entire abdomen, in certain lights, has a golden lustre.

The male resembles the female; the clypeus has a central tooth on its anterior margin.

Hab.—Australia.

In F. Smith's collection.

27. *Pison separatus*, n. sp.

Male. Length 4 lines. Black, punctured, the metathorax not striate, abdomen with silver fasciæ.

Head finely and closely punctured, opaque; the clypeus with a central tooth on its anterior margin, the face with silvery pubescence as high as the sinus of the eyes; tips of the mandibles rufo-piceous, the palpi rufo-testaceous. Thorax slightly shining, closely and rather finely punctured; the metathorax with a central longitudinal channel, the upper portion of which has a slight carina; the collar and sides with short sparing silvery pubescence; the wings smoky and iridescent; the tarsi obscurely rufescent. Abdomen shining, very finely and closely punctured; the apical margins of the segments depressed, and with silvery fasciæ.

Hab.—Western Australia (Champion Bay).

In the British Museum.

28. *Pison fuscipennis*, n. sp.

Female. Length 7 lines. Black, slightly shining, adorned with silvery spots and bands.

Head: the face covered with bright silvery pile, the cheeks with a similar brilliant clothing. Thorax: the collar, sides of the mesothorax, of the metathorax, as well as the pectus, with a bright changeable silvery pile; the mesothorax above, and the scutellum, finely and closely punctured; the anterior wings, excepting their base, and the apex of the posterior pair, fuscous; a semi-transparent nebula crosses the anterior wings a little beyond the second submarginal cell; the metathorax obliquely and finely rugulose above, and transversely and coarsely striate behind. Abdomen: all the segments with brilliant silvery fasciæ on their apical margins; beneath, shining and delicately punctured.

Hab.—Australia (Champion Bay).

In the British Museum.

This species is like *P. Spinolæ*, but is separated from it by its punctured mesothorax and fuscous wings.

29. *Pison decipiens*, n. sp.

Male. Length 3 lines. Black, the legs red.

Head: the tips of the mandibles, the four basal joints of the antennæ, and the legs, ferruginous; the apical margins of the segments of the abdomen rufo-testaceous; the pulvillus of the claw-joints of the legs black; the second joint of the antennæ black at the base, and the fourth joint more or less black above; the face covered with silvery pubescence as high as the emargination of the eyes; the clypeus with an acute tooth in the middle of its anterior margin; the cheeks silvery. Thorax very closely and rather finely punctured, the mesothorax shining above; the metathorax with a central channel, semi-opaque, and with a little silvery pubescence at the sides and behind; the wings subhyaline and iridescent, the nervures black, slightly clouded at their apical margins. Abdomen: very closely and finely punctured, slightly shining; the apical margin with silvery fasciæ above; beneath shining.

Hab.—Australia (Champion Bay).

In the British Museum.

This species has precisely the aspect of a *Tachytes*.

30. *Pison dimidiatus*, n. sp.

Male. Length $2\frac{3}{4}$ lines. Head and thorax black, abdomen red.

Head: clothed as high as the insertion of the antennæ with silvery pubescence, above which, nearly as high as the anterior ocellus, it has a golden lustre; the mandibles, and scape of the antennæ beneath, ferruginous, as are also two or three of the basal joints of the flagellum. Thorax: the mesothorax and scutellum closely and finely punctured; the metathorax punctured above, coarsely so behind; the collar and sides of the metathorax with silvery pubescence; the tegulæ and legs ferruginous, with the anterior coxæ black; wings subhyaline, iridescent, with the nervures black. Abdomen ferruginous,

with the margins of the segments depressed, and having bright silvery fasciæ; beneath, the extreme base of the abdomen is black.

Hab.—Australia (Champion Bay).

In the British Museum.

31. *Pison festivus*, n. sp.

Female. Length $5\frac{1}{2}$ lines. Black, the wings fusco-hyaline, the apical segments of the abdomen with bright golden fasciæ.

Head: the face with a thin silvery pubescence below the insertion of the antennæ, a thin hoary pubescence on the cheeks and vertex. Thorax: the mesothorax shining, and, as well as the scutellum, strongly punctured; the metathorax obliquely rugulose above, on each side of a central impressed line; behind it is strongly punctured; the sides and beneath with a thin hoary pubescence; wings fusco-hyaline. Abdomen shining; the first segment rather strongly punctured, and its apical margin with a little silvery pubescence laterally; the following segments are very finely and very closely punctured, their apical margins with bright golden fasciæ; beneath shining and impunctate.

Hab.—Australia (Champion Bay).

In the British Museum.

32. *Pison tuberculatus*, n. sp.

Male. Length 3 lines. Head and thorax opaque black, the abdomen shining.

Head: the face below the insertion of the antennæ with silvery pubescence, the anterior margin of the clypeus produced into a central acute tooth. Thorax: a thin silvery pubescence on the sides and beneath; the metathorax rounded, obliquely rugulose above, and transversely, more coarsely so behind; wings fusco-hyaline, darkest at their apical margins. Abdomen smooth and shining, the apical margins of the segments depressed; the silvery fasciæ probably obliterated; beneath, the second, third, and fourth segments have two minute tubercles in the middle near their apical margins; those on the third segment are most prominent.

Hab.—New Zealand.

In the British Museum.

33. *Pison insularis*, n. sp.

Female. Length $4\frac{1}{2}$ lines. Black, shining, and finely punctured; the abdomen with silvery bands.

Head semi-opaque, with the face as high as the sinus of the eyes densely clothed with bright silvery pubescence; the cheeks and vertex behind with a thin changeable silvery pubescence; tips of the mandibles rufo-piceous, and the palpi pale testaceous. Thorax: covered with a short thin silvery pubescence, most sparing on the mesothorax; the thorax is very finely punctured; the metathorax oblique, and rounded at the apex, which is transversely striate; a longitudinal channel runs from the base to the apex; wings subhyaline, the nervures black, the outer margin of the tegulæ rufo-piceous. Abdomen shining, and very delicately punctured, the margins of the segments depressed, and with bright changeable silvery bands, not continued beneath.

Hab.—New Hebrides.

In the British Museum.

34. *Pison fabricator*, n. sp.

Female. Length $3\frac{1}{2}$ lines. Black, head and thorax strongly punctured, the abdomen smooth and shining.

Head closely and strongly punctured, the vertex slightly shining, and not so closely punctured as the face; the clypeus and sides of the face as high as the sinus of the eyes covered with bright silvery pubescence; the palpi testaceous. The pro- and meso-thorax strongly punctured; the metathorax truncate, with a deep fossulet at the verge of the truncation above; the upper surface obliquely and strongly striate; the truncation coarsely rugose; the outer margins of the tegulæ testaceous, the wings subhyaline, with their apical margins clouded, the nervures black; the thorax has a thin griseous pubescence. Abdomen smooth and shining, with very delicate scattered punctures.

Hab.—Hong Kong.

In the British Museum.

35. *Pison conformis*, n. sp.

Male. Length 3 lines. Head and thorax punctured and semi-opaque; abdomen shining.

Head: the clypeus and sides of the face as high as the sinus of the eyes with a dense silvery pubescence, the cheeks thinly covered with the same. The mesothorax closely punctured; the metathorax obliquely truncate, smooth, and finely punctured above, but transversely and coarsely striate at the sides and behind, the sides have also some silvery pubescence; a deep longitudinal channel runs from the base to the margin of the truncation, in which is a longitudinal carina; down the truncation runs another deep channel; the wings hyaline and iridescent, the nervures black. Abdomen: the margins of the three basal segments much depressed; the abdomen has a fine hoary pubescent pile, only observable in certain lights.

Hab.—Mexico.

In the British Museum.

Genus PISONITUS, Shuck.

(See Plate VI. fig. 7, for wing of *Pisonitus rugosus*).

1. *Pisonitus rufipes*, Shuck. Trans. Ent. Soc. ii. 79. ♀.

Hab.—Tasmania.

In the British Museum.

2. *Pisonitus argentatus*, Shuck. Trans. Ent. Soc. ii. 79. ♀.

Hab.—Mauritius.

In the British Museum.

3. *Pisonitus rugosus*, Smith, Cat. Hym. Ins. pt. iv. p. 313. ♀.

Hab.—India.

In the British Museum.

4. *Pisonitus ruficornis*, Smith, Cat. Hym. Ins. pt. iv. p. 315. ♀.

Hab.—Australia (MacIntyre River).

In the British Museum.

Genus PARAPISON, n. g.

(See Pl. VI. fig. 6. for wing of *Parapison rufipes*).

Head as wide as the thorax, occasionally wider; eyes large, reniform, ocelli in an equilateral triangle on the

vertex. Thorax sub-ovate, the collar transverse; the metathorax with a central longitudinal channel; the anterior and intermediate tibiæ with a single spine at the apex; the anterior wings with one elongate marginal cell, and two submarginal ones, the first submarginal receiving the first recurrent nervure towards the apex, the second recurrent nervure uniting with the first transverso-medial nervure. Abdomen oblong-ovate, the margins of the first and second segments depressed.

It will be seen that this genus is established solely upon the absence of the second submarginal cell which, in the genus *Pison*, and also in *Pisonitus*, is petiolate; in some species the cell is very minute, in the present genus it is obliterated, and that this is a constant character there can be no doubt, as a large number of specimens of *P. agilis* and of *P. rufipes* have been examined.

1. *Parapison obliteratus*, Smith.

Pisonoides obliteratus, Smith, Journ. Proc. Linn. Soc. Zool. ii. 104.

Hab.—Borneo (Sarawak).

In the collection of W. W. Saunders.

2. *Parapison rufipes*, n. sp.

Female. Length $3\frac{1}{4}$ lines. Black and shining, the legs ferruginous, abdomen with silvery bands.

Head: very finely and closely punctured, the clypeus, inner orbits of the eyes, and the cheeks, with bright silvery pile; the mandibles ferruginous. Thorax punctured like the head; the mesothorax with a central longitudinal depression, and an abbreviated line on each side opposite the tegulæ; the metathorax with a deep central longitudinal channel; the collar and sides of the thorax with silvery pubescence, most dense and long at the sides of the metathorax; the legs ferruginous, with the coxæ black above; wings hyaline and iridescent, the nervures and stigma black. Abdomen; the apical margins of the segments pale testaceous, and covered with silvery pile; the entire abdomen has a thin changeable silvery pile above.

Hab.—India.

In the British Museum.

3. *Parapison ruficornis*, n. sp.

Female. Length 3 lines. Black, legs and antennæ red, the latter with three or four of the apical joints dusky.

Head semi-opaque, finely and very closely punctured; the face with silvery pubescence, which is dense below the insertion of the antennæ, and only observable in certain lights above; the palpi and mandibles rufo-testaceous, the latter rufo-piceous at their apex. Thorax opaque, the metathorax with a central channel, and obliquely rugulose above; the wings hyaline and iridescent, the nervures testaceous. Abdomen slightly shining, the apical margins of the segments narrowly testaceous; the four apical segments with a changeable golden pubescence.

The male closely resembles the female, but has the basal portion of the legs more or less blackish, the tarsi also are dusky; the apical joints of the antennæ are darker than in the other sex.

Hab.—Australia.

In F. Smith's collection.

4. *Parapison agilis*, n. sp.

Female. Length 3 lines. Black, shining and delicately punctured, abdomen with silvery fasciæ.

Head: the face below the insertion of the antennæ with a fine changeable silvery pile; the mandibles pale rufo-testaceous, the palpi paler. Thorax: the collar, sides of the thorax, and metathorax, with silvery pubescence; the mesothorax with one abbreviated deeply-impressed line on each side opposite the tegulæ, the latter rufo-testaceous; the wings hyaline and iridescent, the nervures black, the apical margins slightly clouded; the metathorax obliquely truncate, with an impressed central channel, which runs into a deep fossulet towards the apex; the knees and anterior tibiæ testaceous; the calcaria testaceous. Abdomen with a changeable pile; the margins of the three basal segments depressed, the first deeply so; all the margins with a narrow silvery fasciæ.

Hab.—Ceylon.

In the British Museum.